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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/610,683

07/02/2003

Shigemi Hirasawa

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01/11/2006

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EXAMINER

RIELLEY, ELIZABETH A

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

18

<b>Office Action Summary</b>	<b>Application No.</b> 10/610,683	<b>Applicant(s)</b> HIRASAWA ET AL.	
	<b>Examiner</b> Elizabeth A. Rielley	<b>Art Unit</b> 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.  
 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4-7 and 10-14 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1,4-7 and 10-14 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 02 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:  
         1. ☒ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/21/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

Amendment filed 10/21/05 has been entered and considered by the Examiner. Claims 2, 3, 8 and 9 have been canceled. Claims 13 and 14 have been added. Currently, claims 1, 4-7, and 10-14 are pending in the instant application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 4-7, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hattori (US 5599749) in view of Uchiyama (US 6265770).

In regard to claim 1, Hattori ('749) teaches a display device (figure 29) comprising: a front substrate (66; column 21 line 40 to column 22 line 26; figure 29) forming an anode (67) and phosphors (68) on an inner surface thereon; a back substrate (61) having electron sources (64), provided within a display region, on an inner surface thereof (see figure 29), the back substrate being arranged to face the front substrate in an opposed manner with a given distance there between (see figure 29); an outer frame (left and right 70) which is interposed between the front substrate and the back substrate (66, 61) such that

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the outer frame surrounds the display region (not numbered; see figure 29) so as to maintain the given distance (see figure 29); and distance holding members (middle 70) being sandwiched between the front substrate (66) and the back substrate (61) in an erected manner within the display region (see figure 29) and holding a distance between the front substrate and the back substrate at a given distance; wherein an inside space (not numbered) is surrounded by the front substrate (66), the back substrate (61), and the outer frame (left and right 70; see figure 29) is sealed at a given degree of vacuum (column 1 lines 12-41); and wherein a buffering/fixing material (not numbered; column 21 lines 60-67) is provided between at least one of the front substrate and the back substrate and the distance holding members (see figure 29). Hattori ('749) does not specifically teach that the buffering/fixing material is made of an adhesive material. Uchiyama ('770) teaches the use of a buffering/fixing material in a PDP that is made of an adhesive material (column 7 lines 5-26) in order to form a stronger bond. Thus, it would have been obvious at the time of the invention to one of ordinary skill in the art to combine the display device of Hattori ('749) with the bonding material of Uchiyama ('770) in order to produce a stronger bond within the display device.

In regard to applicant's recitation of the buffering/fixing material is formed by mixing an adhesive with a highly resilient material, which dissipates in a baking step, the Examiner notes that the recitation is considered a product by process limitation. The patentability of the claim resides on the final product and not the process by which it is manufactured. Accordingly, Uchiyama ('770) teachings of a buffering/fixing material made with adhesive material is considered to meet the claimed recitation, since the highly resilient material is not part of the finished product.

In regards to claims 4 and 5, Uchiyama ('770) teaches that the highly resilient material is a low temperature decomposing foamed resin that is urethane (column 7 lines 5-26). The Examiner notes that

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Uchiyama ('770) states the material could be a polyimide resin. However, polyurethane is a common polyimide resin. Motivation for combining is the same as above.

In regard to claims 6 and 12, Hattori ('749) teaches low melting-point glass is used as the adhesive (column 21 line 40 to column 22 line 26).

In regard to claim 7, Hattori ('749) teaches a display device (figure 29) comprising: a front substrate (66; column 21 line 40 to column 22 line 26; figure 29) forming an anode (67) and phosphors (68) on an inner surface thereon; a back substrate (61) having electron sources (64), provided within a display region, on an inner surface thereof (see figure 29), the back substrate being arranged to face the front substrate in an opposed manner with a given distance there between (see figure 29); an outer frame (left and right 70) which is interposed between the front substrate and the back substrate (66, 61) such that the outer frame surrounds the display region (not numbered; see figure 29) so as to maintain the given distance (see figure 29); and distance holding members (middle 70) being sandwiched between the front substrate (66) and the back substrate (61) in an erected manner with in the display region (see figure 29) and holding a distance between the front substrate and the back substrate at a given distance; wherein an inside space (not numbered) is surrounded by the front substrate (66), the back substrate (61), and the outer frame (left and right 70; see figure 29) is sealed at a given degree of vacuum (column 1 lines 12-41); and wherein a buffering/fixing material (not numbered; column 21 lines 60-67) is provided between at least one of the front substrate and the back substrate and the distance holding members (see figure 29). Hattori ('749) does not specifically teach that the buffering/fixing material is made of an adhesive material mixed with a highly resilient material. Uchiyama ('770) teaches the use of a buffering/fixing material in a PDP that is made of an adhesive material mixed with a highly resilient material (column 7 lines 5-26) in order to form a stronger bond within the device. Thus, it would have been obvious at the

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time of the invention to one of ordinary skill in the art to combine the display device of Hattori ('749) with the bonding material of Uchiyama ('770) in order to produce a stronger bond with in the display device.

In regard to claims 10 and 11, Uchiyama ('770) teaches that the resilient material is heat-resistant, aramid-based fibers (column 7 lines 5-26). Motivation for combining is the same as above.

In regard to claims 13 and 14, Hattori ('749) teaches the buffering/fixing material (not numbered; column 21 lines 60-67) fixes at least one of the front substrate and the back substrate and the distance holding members (66, 61, or middle-70) to at least one other of the front substrate and the back substrate and the distance holding members (66, 61, or middle 70; see figure 29). Motivation to combine is the same as above.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 4-7, and 10-12 have been considered but are moot in view of the new ground(s) of rejection.

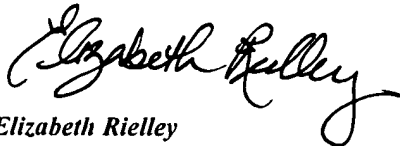
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth A. Rielley whose telephone number is 571-272-2117. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

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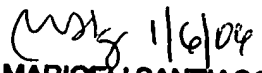
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar Patel can be reached on 571-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



*Elizabeth Rielley*

*Examiner*  
*Art Unit 2879*



MARICELI SANTIAGO  
PRIMARY EXAMINER